creating a link between a private network router and a shared network router, assigning a Virtual Private Networks (VPN) identifier to said shared network router;

assigning said VPN identifier to at least one other shared network router; and creating at least two label switched paths between said shared network router and said at least one other shared network router, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path.

20. (Newly submitted) The method of configuring virtual private networks according to Claim 19 wherein:

said at least one other shared network router includes a plurality of shared network routers; and

said creating at least two label switched paths includes creating at least two unidirectional point-to-point label switched paths between said shared network routers.

21. (Newly submitted) The method of configuring virtual private networks according to Claim 20 wherein:

said creating at least two label switched paths further includes creating at least one bidirectional multi-point -to-multi-point label switched path between said shared network routers.

22. (Newly submitted) The method of configuring virtual private networks according to Claim 20 wherein said creating at least two unidirectional point-to-point label switched paths is done using a next best hop route.



 (Twice Amended) A virtual private network which enables private communications, over a shared Multi-Protocol Label Switching (MPLS) network, between at least two private networks comprising:

a first router coupled to the shared MPLS network and configured to dynamically distribute first router Virtual Private Networks (VPN) information across the shared MPLS network, wherein said first router VPN information includes a VPN identifier which is assigned to said first router;

a second router coupled to the shared MPLS network and configured to dynamically distribute second router VPN information across the shared MPLS network; wherein said second router VPN information includes a VPN identifier which is assigned to said second router;

wherein said first and second routers are also configured to establish a plurality of label switched paths therebetween, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path; and,

wherein said VPN identifier assigned to said first router is the same as said VPN identifier assigned to said second router.

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7. (Twice Amended) A virtual private network which enables private communication, over a shared Multi-Protocol Label Switching (MPLS) network, between at least two actual networks comprising:

first router means coupled to the shared MPLS network for dynamically distributing first router means Virtual Private Networks (VPN) information across the